

## CHAPTER 1 GENERAL DESCRIPTION

---

### 1.1 Introduction

---

This manual describes the DTC3SL board, which features three asynchronous serial interfaces, compatible with a DLV11 and a programmable line time clock. DTC3SL is a dual width board for Q-bus based computer systems.

The DTC3SL board is designed as the primary interface board for user input and output. In general channel 1 will be use for connecting the main console at the vector 60/64. Channel 2 will normally be used for a serial line printer and channel 3 is designed for connecting a modem, therefore this channel is equipped with a split baudrate so that the 75/1200 baud modems can be used easily. To facilitate the use of the RSTS and RSX11M operating systems a programmable line time clock is incorporated at this DTC3SL board.

Chapter 1 gives general information and specifications.

Chapter 2 contains all necessary information for installing.

Chapter 3 informs about the necessary maintenance.

Chapter 4 informs about programming.

Chapter 5 contains all electrical drawings.

Chapter 6 deals with "engineering change orders" (ECO's).

Appendix 1 standard address and vector prom list.

### 1.2 Purpose

---

DTC3SL is a dual width card, that plugs directly into the LSI-11 Q-bus.

The card contains 3 independent asynchronous serial line interfaces and a programmable line time clock.

Each channel has its own EIA RS232 interface, with selection of data rate, data format, Q-bus address and interrupt vector address. Channel 3 data rate can be selected for receive as well as transmit.

The line time clock runs at 60 Hz and can be enable or disabled via software (interrupt enable) or by a jumper.

The DTC3SL connects to external devices through a 40 pin connector. At the end of this cable there's a connector-assembly which provides four 25 pin D-type connector, switches for datarates



huis ter heideweg 28, postbus 2  
3700 AA zeist, tel. 03404-21344

RECEIVED

1911

1. The first of the two main parts of the book is devoted to a description of the various forms of the verb 'to be' in the different dialects of the English language.

2. The second part of the book is devoted to a description of the various forms of the verb 'to have' in the different dialects of the English language.

3. The third part of the book is devoted to a description of the various forms of the verb 'to do' in the different dialects of the English language.

4. The fourth part of the book is devoted to a description of the various forms of the verb 'to go' in the different dialects of the English language.

5. The fifth part of the book is devoted to a description of the various forms of the verb 'to come' in the different dialects of the English language.

6. The sixth part of the book is devoted to a description of the various forms of the verb 'to see' in the different dialects of the English language.

7. The seventh part of the book is devoted to a description of the various forms of the verb 'to hear' in the different dialects of the English language.

8. The eighth part of the book is devoted to a description of the various forms of the verb 'to feel' in the different dialects of the English language.

9. The ninth part of the book is devoted to a description of the various forms of the verb 'to think' in the different dialects of the English language.

10. The tenth part of the book is devoted to a description of the various forms of the verb 'to know' in the different dialects of the English language.



and jumpers. (for setting see section 3).

The connector assembly is called RS3000, and is standard included with the DTC3SL.

As an option there are two types of current loop adaptors:

- CL1000 three channels 20 mA current loop, up to 9600 baud.
- CL2000 three channels 20 mA current loop, up to 19200 baud.

Both are jumper selectable for active or passive operation. The option can be plugged easily onto the RS3000 assembly.

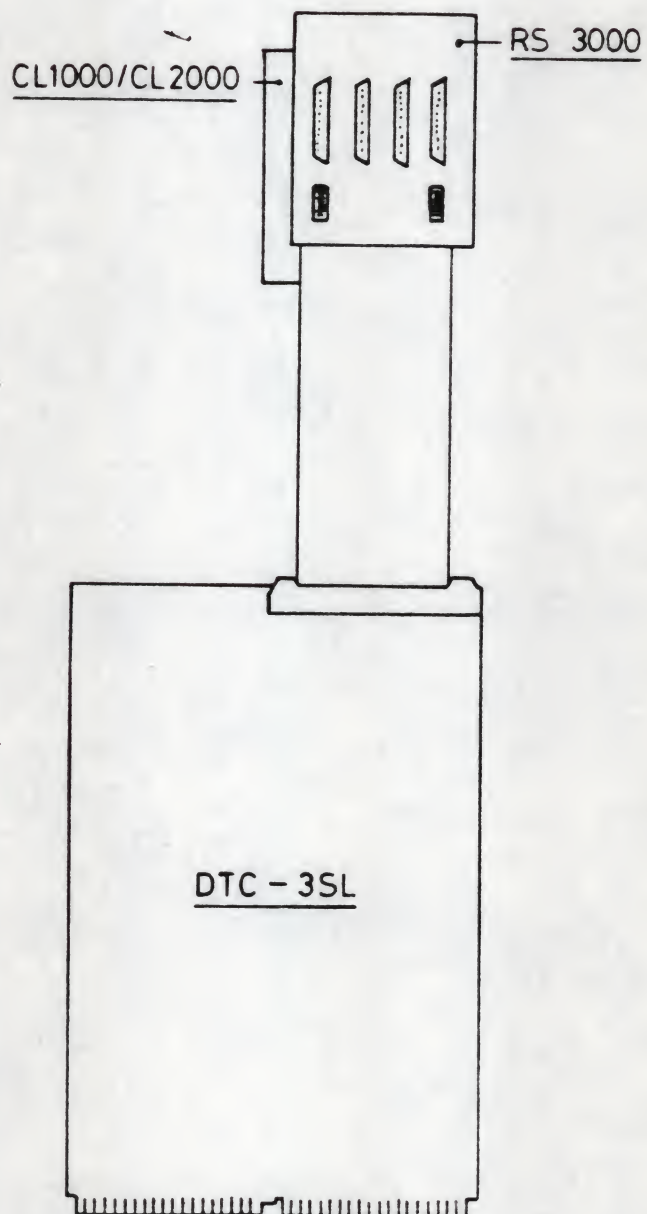
If current loop option is installed, RS232 as well as CL is available for transmitted data.

Received data can be jumpered per channel for RS or CL (RS3000 brd).

When the currentloop adaptor is strapped as passive, the adaptor provides a galvanic insulation between terminal and interface.



DTC3SL + adaptors







### 1.3 Specifications

### 1.3.1 Physical dimensions

```
PCB      thickness      : 1.6 mm
         width          : 133 mm
         length         : 229 mm (including plastic handles)
         max comp. height : 10 mm
         total thickness  : 12.5 mm
```

### 1.3.2 Operating environment

Temperature : ambient air temperature range of 0 to +55 degrees C  
Thermal shock : 30 degrees C per hour  
Humidity : 0 to 95% relative humidity (non condensing)  
Cooling : Suggested air flow of 25 cfm

### 1.3.3 Shipping environment

Temperature : the DTC3SL can withstand a temperature range of -40 to +85 degrees C during shipping and storage.

Thermal shock : 10 degrees C per minute.

Mechanical shock : The DTC3SL module housed in its shipping-container can withstand a mechanical shock resulting of a drop conforming to test in accordance with MIL-STD-810B, method 516, procedure V without any damage or degradation.

#### 1.3.4 Power requirements

	without adaptor	rs232	current loop
+ 5V	0.8A	0.9A	1.1A
+12V	0.08A	0.1A	0.4A

Internal generation of -12V

### 1.3.5 Addressing and speed range

Addressing range: 174000-177770 (prom selectable)  
Vector range: 0-774 (prom selectable)

Speed selection: 50,75,110,134.5,150,300,600,1200,1800,2000  
2400,3600,4800,7200,9600,19200 baud.  
(jumper or switch or remote selectable see 3.4)







### 1.3.6 Reliability

-----

The DTC3SL modules are designed to meet the best commercial standards of workmanship. Extensive testing is conducted to ensure a reliable service over the products lifetime.

### 1.4 Options

-----

As an option there are two types of current loop adaptors:

- CL1000, three channel 20 mA current loop, up to 9600 baud.
- CL2000, three channel 20 mA current loop, up to 19200 baud.

Both are jumper selectable for active or passive operation. The option can be plugged easily onto the RS3000 assembly.

If current loop option is installed, RS232 as well as CL is available for transmitted data.

Received data can be jumpered per channel for RS or CL (Jumper position q and k on the RS3000 board.)

ROYAL ANTHROPOLOGICAL INSTITUTE

Vol. 100, Part 1, 1970

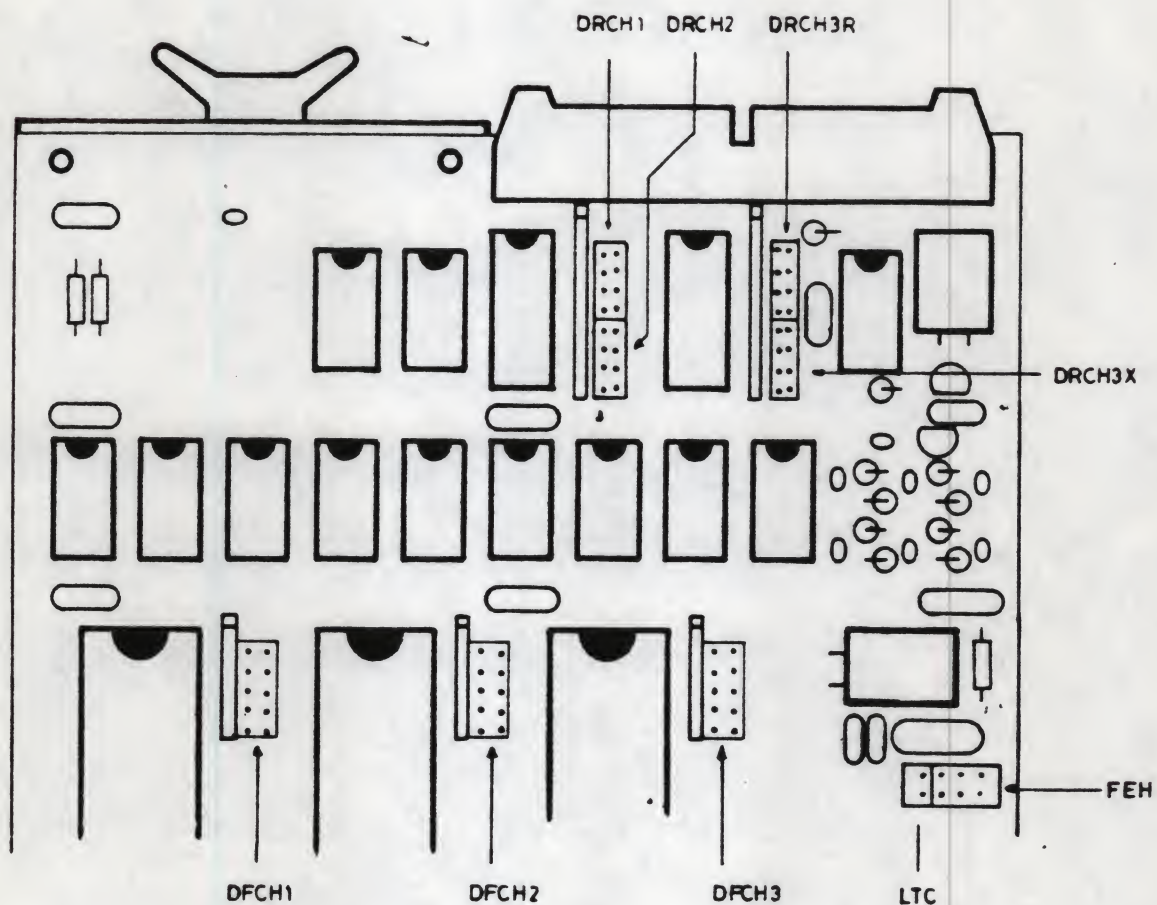
Edited by

Prof. Sir

...



"jumper-positions"







## CHAPTER 2 INSTALLATION

---

The section contains information on procedures to install DTC3SL modules in Q-bus computer systems.

Installation should be performed by qualified personnel only. Incorrect installation cannot only damage the interface board, but also all other system components.

After carefully unpacking the interface board, it should be inspected for any physical damage. If any damage is found or expected, contact your distributor and do not install the board.

### 2.1 Switches/Jumpers DTC3SL

---

#### 2.1.1 Address selection

---

The address selection is performed by inserting the correct prom, with programmed pattern, into the prom-position marked as Ax. The addresses of all channels have to be within the range of 174000-177770. Appendix 1 shows the standard address selections. Other combinations can be made by Datelcare on customer request. The address of the control and status register of the line time clock is fixed at 777546.

#### 2.1.2 Vector selection

---

The vector selection is performed by inserting the correct prom, with programmed pattern, into the prom-position marked as Cx. The vectors of all channels have to be within the range of 000-774. Appendix 1 shows the standard vector selections. Other combinations can be made by Datelcare on customer request. The vector of the line timeclock will be determined by the processor automatically because the DTC3SL board uses the BEVENTL bus line to interrupt the processor.

#### 2.1.3 Data format selection

---

Jumper-field DFCHx (x=channel number 1 to 3) can be used to select the data format.

103

104

105

106

107

108

109

110

111